

What is claimed is:

1. A method of recommending a battery type for a battery-powered device, the method comprising:
 - recommending the battery type that has a constructive effect on one or both of
- 5 device performance and battery performance or life during device usage, wherein recommending is based on a use model of the device.
2. The method of Claim 1, wherein the recommended battery type is selected from a set of battery types that is usable with the device.
3. The method of Claim 1, further comprising:
 - 10 determining the use model of the device from monitoring the device usage.
4. The method of Claim 3, wherein determining the use model comprises adapting the use model to changes in the monitored device usage over time.
5. The method of Claim 4, wherein recommending the battery type comprises adapting to any changes in the adapted use model.
- 15 6. The method of Claim 3, wherein the device usage is monitored comprising monitoring a parameter that yields data on one or both of the device performance and the battery performance or life using an installed battery, the data representing the use model.
7. The method of Claim 3, wherein monitoring the device usage comprises
20 measuring energy used by the device with an installed battery; and recording the measured energy used as a function of time.
8. The method of Claim 7, wherein measuring and recording comprise
measuring and recording one or more of a current flowing from the installed battery to
the device, a current in a power supply of the device that is proportional to the current
25 flowing from the installed battery, a peak or maximum energy used or drawn from the

installed battery in a series of time intervals, a peak power per time interval, a decrease in energy stored in the installed battery, and energy remaining in the installed battery

9. The method of Claim 3, wherein monitoring the device usage comprises
5 recording as a function of time one or more of operational modes of the device and operations of the device performed using an installed battery to obtain recorded information; and optionally computing energy usage from the recorded information and from information regarding energy used by the respectively recorded information.

10. A method of recommending a battery type based on a use model of a
battery-powered device, the method comprising:
monitoring usage of the device to determine the use model; and
recommending the battery type based on the monitored usage.

11. The method of Claim 10, wherein the recommended battery type has a constructive effect on one or both of device performance and battery performance or
15 battery life during device usage according to the use model.

12. The method of Claim 10, wherein recommending the battery type comprises mapping results from the monitored usage into a database of characteristics for a set of battery types usable by the device.

13. The method of Claim 12, wherein recommending the battery type further
20 comprises suggesting a source for the recommended battery type.

14. The method of Claim 10, further comprising:
determining a battery type that is installed in the device during monitoring usage.

15. The method of Claim 14, wherein determining a battery type comprises
25 one or more of inputting an identifier for the installed battery by a user of the device

that indicates the battery type and measuring a parameter of the installed battery with the device that relates to the battery type.

16. The method of Claim 14, wherein the battery type of the installed battery is determined one or more of during monitoring usage, before monitoring usage, when
5 a battery compartment of the device is accessed, when a battery type is recommended, when the device is first turned ON, when the use model changes, and periodically during use of the device.

17. A device having a use model-based adaptive battery type selection, the device comprising:

10 means for monitoring usage of the device by a user that determines a use model; and
means for recommending a battery type based on the determined use model, the battery type being from a set of battery types usable with the device.

18. The device of Claim 17, wherein the means for monitoring comprises an
15 energy consumption monitor that monitors energy consumed from a battery installed in the device as a function of time during the device usage.

19. The device of Claim 17, wherein the means for recommending comprises a mapping function that relates monitored usage from the monitoring means to a recommended battery type from the set of battery types, the recommended battery
20 type having a constructive effect on one or both of device performance and battery performance or life during device usage according to the use model.

20. A battery-powered device having a use model-based adaptive battery type selection, the device comprising:

a monitor that monitors device usage and determines a use model;
25 a controller that controls the monitor;
a memory; and

a computer program stored in the memory and executed by the controller, the computer program comprising instructions that, when executed by the controller, recommend a battery type based on the determined use model.

21. The device of Claim 20, wherein the recommended battery type has a
5 constructive effect on one or both of device performance and battery performance or life during the device usage according to the use model.

22. The device of Claim 20, further comprising:
a user interface accessible to the user, the instructions of the computer program employ the user interface to communicate the recommended battery type to the user
10 under the control of the controller.

23. The device of Claim 20, wherein the instructions of the computer program that recommend the battery type comprises a mapping function that relates the monitored device usage to a battery type in a database of battery types used with the device.

15 24. The device of Claim 20, wherein the monitor is an energy monitor that monitors one or more of energy consumed by the device and energy remaining in a battery installed in the device as a function of time during device usage to determine the use model.

20 25. The device of Claim 20, wherein the monitor is a portion of the computer program, the monitor portion of the computer program comprises instructions that, when executed by the controller, monitor and record operational modes of or operations performed by the device as a function of time during device usage to determine the use model.